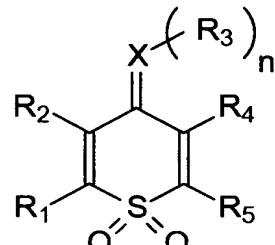


## ABSTRACT OF THE DISCLOSURE

The present invention relates to an electrochromic material, and a device utilizing the electrochromic material, comprising a substituted-1,1-dioxo-thiopyran of the general structure I:



5

wherein:

X is carbon, nitrogen, oxygen, or sulfur;

n is 0, 1 or 2;

10 R3 is independently an electron withdrawing group or a substituted or unsubstituted alky or aryl group;

R1 and R5 each independently represent a substituted or unsubstituted alkyl group, a substituted or unsubstituted aryl group, or a substituted or unsubstituted heterocyclic group; and

15 R2 and R4 each independently represent hydrogen, or an electron withdrawing group, or a substituted or unsubstituted alkyl group.